UNITED STATES DEPARTMENT OF THE INTERIOR
U. S. - MEXICO BORDER FIELD COORDINATING COMMITTEE

WATER-RESOURCES ISSUES IN THE RIO GRANDE--RIO CONCHOS TO AMISTAD RESERVOIR SUBAREA

Fact Sheet

INTRODUCTION

In 1994, the U.S. Department of the Interior (DOI) chartered the U.S.-Mexico Border Field Coordinating Committee for the purpose of promoting and facilitating coordination among the DOI bureaus on environmental issues of Departmental interest along the U.S.-Mexico border. One of the foremost issues identified was that of shared-water resources. A multibureau Shared-Water Resources Issues Team was created to identify, compile, and communicate significant issues related to the shared-water resources of the U.S.-Mexico border area. Woodward and Durall (1996), as part of the Issues Team, used surface-water drainage basins as the primary basis for defining and delineating the extent of the border area from a shared-water resources perspective, and divided the border area into eight subareas (fig. 1). This Fact Sheet presents shared-water resources issues along the Rio Grande from its confluence with the Rio Conchos to the Amistad Reservoir and Dam from a DOI perspective.

WATER-RESOURCES ISSUES IDENTIFICATION

The Issues Team surveyed representatives of the various DOI bureaus to identify the significant management and scientific issues associated with shared-water resources in each subarea (fig. 1). The Issues Team acknowledges a number of deficiencies in the issue-identification process in that not all the land owners/managers in the subareas were surveyed: (1) issues were not identified for non-Federal lands, including those managed by the State of Texas or privately owned, and (2) issues have been identified only for the U.S. portion of the subarea, and a comprehensive issue-identification process requires data from Mexico. These deficiencies notwithstanding, the Issues Team has identified a large number of the most pressing issues associated with shared water resources from a DOI perspective. Solicitation of additional input from the States of Texas, Chihuahua, and Coahuila; the Government of Mexico; and private land owners would enhance future efforts to more completely identify shared-water resource issues in the border area.

RIO GRANDE- -RIO CONCHOS TO AMISTAD RESERVOIR SUBAREA

The Rio Grande--Rio Conchos to Amistad Reservoir subarea (fig. 2) encompasses a total of 34,630 square miles (mi^2), of which 13,910 are in Mexico and 20,720 are in the United States. The subarea generally is hot, and the climate varies from semiarid to arid. Average annual rainfall (1961-90) ranged from about 11 inches per year at Presidio, Tex., to about 19 inches per year at the upper elevations of the Chisos Mountains in Big Bend National Park (W.H. Asquith, U.S. Geological Survey, written commun., 1997). This sparsely populated subarea (1990 U.S. population less than 40,000) is predominantly open range and is divided between the Basin and Range and Great Plains physiographic provinces. The Basin and Range province, from Big Bend National Park westward, is characterized by isolated mountain ranges separated by desert basins characteristic of the northern Chihuahuan Desert. Caprock mesas, dry arroyos, and broad alluvial fans are the most prominent features of the Great Plains province.

Surface-water features include the Rio Grande and three major tributaries--Rio Conchos (26,404 mi^2 watershed), Pecos River (35,308 mi^2 watershed), and Devils River (4,305 mi^2 watershed)--the latter two contributing flow directly to Amistad Reservoir. Other surface-water features include springs, ephemeral and intermittent streams, and tinajas (water pockets often below small waterfalls). The Rio Grande flows through deep, steep-walled canyons of limestone, (fig. 3) forming a ribbonlike oasis of riverine and riparian environments and providing a stark comparison to the adjacent desert landscape. The Rio Conchos watershed in its entirety contains almost one-half the entire Rio Grande drainage area in Mexico. For the purpose of this assessment, only that portion of the Rio Conchos watershed downstream from the now discontinued Falomir streamflow-gaging station, near the Luis Leon Dam, is included in this subarea. Similarly, only that portion of the Pecos River watershed downstream from the gaging station at Girvin, Tex., is included in this subarea.

Figure 1. Subareas within the U.S.-Mexico border area.